COUNTY BOROUGH OF WARRINGTON.

With the Compliments of
The Medical Officer of Health
Warrington.

ANNUAL REPORT

TO THE

EDUCATION AUTHORITY

ON

SCHOOL HYGIENE

For the Year 1918,

BY

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To the Education Authority of the

County Borough of Warrington.

Gentlemen,

I beg to submit to you my Sixth Annual Report on School Hygiene, viz., that for the year 1918.

During this period, among other work, there were examined in the Elementary Schools 3,267 children at Routine Medical Inspections (see page 7 *et seq.*).

In addition, 7,955 children were examined at various special inspections either in the Schools or at the Clinic, or a total of 11,222 children medically examined.

No less than 39,991 attendances of 5,124 school children were made at the Clinic for the treatment of various minor ailments.

The outstanding features revealed by Medical Inspection for the year are the pronounced reduction in the number of cases of malnutrition, together with a marked increase in the number of cases of uncleanliness and of various skin affections, often the result of neglect of personal hygiene. Among other causes the industrial employment of mothers has to some extent played a part, and a few remarks on this subject are given on page 28.

SECTION I.

Sanitary Condition of the Public Elementary Schools of the Borough.

No structural alterations of note were made in any of the schools during the year 1918.

Visits of inspection have been paid as in former years, and a general resumé of the sanitary conditions of the schools will be found in my Annual Report for 1914.

SECTION II.

Infectious Disease Among School Children.

The measures taken to prevent the spread of infectious disease have been the same as in previous years and will not be detailed here.

Comparative figures of the amount of infectious disease (both notifiable and non-notifiable) occurring among school children for a period of five years were given in the 1917 Report. The figures for 1918 are as follows:—

1.—Notifiable Infectious Diseases.

Year.	Scarlet Fever. cases	Diphtheria. cases	Enteric Fever. cases	Pulmonary Tuberculosis. cases	Other Tubercular Diseases cases	Measles. cases	German Measles. cases
1918	133	41	—	27	38	182	36

A comparison of the number of cases of Measles occurring in school children compared with those under school age during the different quarters of the year are shown in the following table:—

MEASLES.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.		Total.
School children	3	46	46	87	=	182
Children under school age	15	53	26	74	=	168
	18	99	72	161		350

2.—Non-Notifiable Diseases.

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.		Total.
Whooping Cough ...	8	353	83	24	=	468
Chicken-pox	69	116	49	41	=	275
Mumps	8	2	9	44	=	63
Sore Throat	93	105	68	162	=	428

School Closure was not resorted to as a preventive measure for any outbreak of infectious disease in 1918, but all the schools in the Borough were closed for 14 days from November 25th during the influenza epidemic owing to the impossibility of carrying on with the depleted staffs of teachers.

In order to minimise, as far as possible, the risk of conveying infection to school, certain children are referred daily to the Medical Officer of Health. These cases consist of

convalescents from infectious disease;
contacts with infectious disease;
children who are suspected of infectious disease;
children suffering from sore throats;

and the numbers dealt with in 1918 are shown in the next table:

Children Examined by Medical Officer of Health as to Freedom from Infection.

Disease.	Number of Examinations	Cases Detected.	
	1918.	1918.	
		Scarlet Fever.	Diphtheria.
SCARLET FEVER (Convalescents examined as to their fitness to return to School.)	115	—	—
DIPHTHERIA Ditto.	49	—	—
CONTACTS with cases of Diphtheria examined previous to being allowed to attend School after case removed to Hospital.	82	—	—
SORE THROATS (examined previous to being allowed to attend School).	458	1	6
Totals	704	1	6

Deaths from Infectious Diseases and all other causes among children of school age during the past five years are given in the following table:—

Cause of Death.	1914.	1915.	1916.	1917.	1918.
Scarlet Fever	12	15	—	—	2
Diphtheria	3	9	3	1	3
Enteric Fever	1	1	—	—	—
Measles	—	2	1	5	—
Whooping Cough	2	1	2	—	4
Diarrhœa	1	1	—	—	—
Tuberculosis of Lungs	7	7	13	9	4
Other Tubercular Diseases ...	7	10	—	6	5
Influenza	—	—	—	—	26
All other causes	27	39	39	37	46
Totals	60	85	58	58	90

BACTERIOLOGICAL EXAMINATIONS.

Examinations made for the detection of Diphtheria:—

Year.	Number of Examinations made.	Positive Results.	Negative Results.
1913	200	7	193
1914	197	5	192
1915	123	6	117
1916	195	6	189
1917	191	3	188
1918	110	1	109

The following table shows the number of visits paid by the Sanitary Inspectors to the homes of school children in investigating and supervising outbreaks of infectious disease:—

To premises where cases of Scarlet Fever, Enteric Fever, or Diphtheria occurred ...	306
Re-visits to ascertain if contacts with Scarlet Fever, Enteric Fever and Diphtheria were free from infection and fit to return to School	270
Re-visits to case of Scarlet Fever, Diphtheria or Enteric Fever being treated at home ...	35
Visits to premises where there were cases of Measles	356
Re-visits to homes where cases of Measles are being treated	396
Visits to homes of children reported by Education Department as being absent from School, owing to either Whooping Cough, Chickenpox, or Mumps	1606
Re-visits to homes of children suffering from either Whooping Cough, Chickenpox, or Mumps	2318
Visits to homes of children absent from School with Sore Throat or Suspicious Rash ...	424
Visits to homes where there were cases of Influenza	844
Total	6555

SECTION III.

The Routine Medical Inspection of School Children and the Work Carried Out at the Inspection and Treatment Clinics, together with the Supervision of the Home Life of the Children.

A.—ROUTINE MEDICAL INSPECTION.

This work has been carried on much as in former years.

Altogether 3267 children (1635 boys and 1632 girls) were medically examined at the Routine Inspections. This number is less than in the previous year, owing to the fact that fewer days were devoted to inspection. The temporary Assistant School Medical Officer (Dr. Gilder) resigned in April to take up another post, and a month supervened before Dr. Paulusz, who was appointed in his place, was able to commence duties. Further than this the epidemic of influenza interfered considerably with the attendance of the children.

In addition to the 3267 children examined in the elementary schools the entrant group of children (29 boys and 29 girls) attending the Secondary School were examined for the first time (see pages 16-17).

Among the 3267 children, 1205 were referred for treatment of some defect other than dental defects and uncleanliness, and 550 for this latter condition.

Further particulars of the children examined are given in Table I., page 8; of the defects found in Table II., page 9; of the numbers referred for treatment in Table II., page 9; and of the actual number that received treatment in Table IV. on page 22.

It must be borne in mind that many of the children are re-examined on several occasions and no mention is made in these tables of the re-examinations, the examination of mentally and physically defective children (page 17), the examination of children for special schools, scholarships, &c. (pages 25-26), or the examination of children at the Secondary School (pages 16-17).

TABLE I. Number of Children Inspected 1st January, 1918, to 31st December, 1918, together with the figures for 1917.

A.—"CODE" GROUPS.

	Entrants. (5 years).		Intermediate. (8 years).		Leavers. (13 years).		TOTAL.	
	1918.	1917.	1918.	1917.	1918.	1917.	1918.	1917.
Boys	278	856	672	763	685	632	1635	2251
Girls	349	716	668	719	615	602	1632	2043
Totals	627	1572	1340	1482	1300	1240	3267	4294

B.—GROUPS OTHER THAN "CODE."

	1 Special Cases.		2 Re-examinations. (*i.e.* No. of Children Re-examined).		3 No. of Children Examined at Inspection Clinic.		TOTAL.	
	1918.	1917.	1918.	1917.	1918.	1917.	1918.	1917.
Boys	175	244	1664	1999	5917	4663	7955	7125
Girls	199	219						
Totals	374	463	1664	1999	5917	4663	7955	7125

GRAND TOTALS: 11,222 in 1918.
11,419 in 1917.
10,522 in 1916.

1 Special cases, pages 15 and 16, brought out by teachers at the Routine Inspections.

2. Cases followed up from Routine Examinations. Cases of Tuberculosis examined at Health Office, page 13, together with "Further Examinations," page 16.

3. Inspection Clinic Cases, page 24, together with those sent by teachers as contagious and non-contagious diseases, pages 24 and 25, together with those sent by School Attendance Officers on account of doubt as to their inability to attend school, page 25.

TABLE II.

Return of Defects found in the course of Medical Inspection in 1918.

DEFECT OR DISEASE.	Code Groups.		Specials.	
	Number referred for treatment.	Number requiring to be kept under observation but not referred for treatment.	Number referred for treatment.	Number requiring to be kept under observation but not referred for treatment.
1.	2.	3.	4.	5.
Skin—				
Malnutrition	49	—	2	—
Uncleanliness of : Head ...	506	—	15	—
Uncleanliness of : Body ...	44	—	3	—
Ringworm : Head	11	—	—	—
Ringworm : Body	19	—	2	—
Scabies	17	—	—	—
Impetigo	49	—	18	—
Other Diseases	4	—	15	—
Eye—				
Defective Vision & Squint ...	381	—	149	54
External Eye Diseases ...	87	—	26	—
Ear—				
Defective Hearing	—	—	—	—
Ear Disease	39	—	25	2
Teeth—				
Dental Disease. (See N.B. (2) below).	193	—	—	—
Nose and Throat—				
Enlarged Tonsils	153	—	5	1
Adenoids	298	—	35	24
Enlarged Tonsils and Adenoids	22	—	9	—
Defective Speech	1	—	—	2
Heart & Circulation—				
Heart Disease Organic ...	3		—	—
Heart Disease Functional...	11	8	1	—
Anæmia	8	19	—	1
Lungs—				
Pulmonary Tuberculosis :		—	—	—
Definite	—	—	—	—
Suspected	3		3	—
Chronic Bronchitis	72	—	1	—
Other Diseases	—	—	—	—
Nervous System—				
Epilepsy		—	—	—
Chorea	7	—	—	—
Other Diseases	1	—	—	—
Non-Pulmonary Tuberculosis—				
Glands	2	—	—	—
Bones and Joints	—	—	—	—
Other Forms	3	—	—	—
Rickets	1	—	—	—
Deformities	4	—	—	—
Other Defects or Diseases ...	58	—	—	13

Fuller particulars as to the sex and age of the children affected will be found in the Summary Tables (Table IIa) at the end of the Report.

Attendances at Routine Inspection.—The percentage of attendances of those notified that the medical inspection was to take place was approximately that of previous years.

Number of Parents Present.—In 17.3% of cases, compared with 19.4% in 1917, one of the parents was present at the time of the inspection.

Average Height and Weight.—In general it may be said that a slightly higher percentage of normal children was found than previously.

The table on page 11 compares the average heights and weights of the children examined in the various age groups for the past ten years.

Nutrition and Malnutrition.—The figures for 1918 contrasted with the past six years are as follows:—

	Above Normal.	Normal.	Below Normal.	Markedly Defective.
1918	8.17	86.87	3.46	1.5
1917	10.34	82.8	4.9	1.95
1916	8.3	81.5	8.2	1.8
1915	7.6	83.7	8.6	.2
1914	9.7	87.9	2.2	.02
1913	8.3	86.7	4.7	—
1912	15.2	83	1.5	.18

Verminous Heads.—There is an increase in the number of verminous heads to be noted, especially among the older girls, and the reduction that has been so gratifying in past years is checked for the present:—

39.7 per cent. in 1911.
27.9 ,, ,, ,, 1912.
11.9 ,, ,, ,, 1913.
10.8 ,, ,, ,, 1914.
7.3 ,, ,, ,, 1915.
10 ,, ,, ,, 1916.
10.73 ,, ,, ,, 1917.
15.8 ,, ,, ,, 1918.

VISION (continuation of Table IIA.)

VISION.		Entrants, 627.				Intermediate, 1340.				Leavers, 1300.				Total, 3267.				Special Cases.		
R.	L.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total
	6/6									1	1	2	.15	1	1	2	.07			
	6/9					1	1	2	.15		1	1	.08	1	2	3	.11	1		1
	6/12										1	1	.08		1	1	.03			
	6/18					1		1	.07					1		1	.03			
	6/60																	1	1	2
6/6	—					1	1	2	.15					1	1	2	.07	1		1
6/6	6/6					201	122	323	24.11	222	174	396	30.4	423	296	719	27.03		5	5
6/6	6/9					48	39	87	6.49	61	49	110	8.4	109	88	197	7.61	1	3	4
6/6	6/12									2	2	4	.35	2	2	4	.14	1		1
6/6	6/18									2		2	.15	2		2	.07			
6/6	6/24					1		1	.07					1		1	.03			
6/6	6/36										1	1	.08		1	1	.03			
6/6	6/60																			
6/6	6/120																			
6/9	6/9					265	295	560	41.79	227	204	431	33.1	492	499	991	39.04	7	13	20
6/9	6/6					25	24	49	3.66	19	19	38	3.	44	43	87	3.39	1		1
6/9	6/12					17	19	36	2.69	23	34	57	4.3	40	53	93	2.19	2	3	5
6/9	6/18					3	12	15	1.12	13	11	24	1.8	16	23	39	1.52			
6/9	6/24					3	3	6	.45	4	1	5	.45	7	4	11	.35			
6/9	6/36					1	3	4	.3	2	3	5	.45	3	6	9	.3	1		1
6/9	6/60									4	2	6	.47	4	2	6	.19		1	1
6/9	6/120																			
6/9	—						2	2	.15	2	1	3	.22	2	3	5	.16			
6/12	6/12					19	34	53	3.95	29	26	55	4.3	48	60	108	4.15	3	8	11
6/12	6/6						1	1	.07	4		4	.35	4	1	5	.16			
6/12	6/9					17	17	34	2.54	10	7	17	1.3	27	24	51	1.98	3	4	7
6/12	6/18					7	11	18	1.34	2	3	5	.45	9	14	23	.79	1		1
6/12	6/24					1	2	3	.23	1	1	2	.15	2	3	5	.16			
6/12	6/36									2		2	.15	2		2	.07		2	2
6/12	6/60																			
6/12	6/120																			
6/12	—										1	1	.08		1	1	.03			
6/18	6/18					17	26	43	3.21	16	17	33	2.6	33	43	76	2.92	9	8	17
6/18	6/6					1		1	.07					1		1	.03			
6/18	6/9					2	6	8	.6	5	10	15	1.2	7	16	23	.79			
6/18	6/12					5	1	6	.45	5	4	9	.66	10	5	15	.52		1	1
6/18	6/24					2	4	6	.45		3	3	.22	2	7	9	.3			
6/18	6/36					2	1	3	.23	1		1	.08	3	1	4	.14	1		1
6/18	6/60										1	1	.08		1	1	.03		1	1
6/18	6/120																			
6/18	—																			
6/24	6/24					7	10	17	1.27	4	7	11	.8	11	17	28	.95	4	2	6
6/24	6/6									1		1	.08	1		1	.03			
6/24	6/9					1	1	2	.15		2	2	.15	1	3	4	.14			
6/24	6/12					2	1	3	.23	1	1	2	.15	3	2	5	.16	1		1
6/24	6/18					4	5	9	.67	1	1	2	.15	5	6	11	.35	1		1
6/24	6/36						4	4	.3		2	2	.15		6	6	.19			
6/24	6/60									2	1	3	22	2	1	3	.11			
6/24	6/120																			
6/24	—																			
6/36	6/36					1	3	4	.3	2	5	7	6	3	8	11	.35	3	7	10
6/36	6/6																			
6/36	6/9					1	2	3	.23	3	1	4	.35	4	3	7	.23	1		1
6/36	6/12						1	1	.07		1	1	.08		2	2	.07		2	2
6/36	6/18					1	3	4	.3	3	1	4	.35	4	4	8	.26			
6/36	6/24										1	1	.08		1	1	.03	2	2	4
6/36	6/60										1	1	.08		1	1	.03	2	3	5
6/36	6/120																			
6/36	—																		1	1
6/60	6/60					1	1	2	.15	2	4	6	.47	3	5	8	.26	1	1	2
6/60	6/6																			
6/60	6/9									3	2	5	.45	3	2	5	.16			
6/60	6/12																			
6/60	6/18					2	1	3	.23					2	1	3	.11			
6/60	6/24						1	1	.07	2	1	3	.22	2	2	4	.14		1	1
6/60	6/36						1	1	.07		3	3	.22		4	4	.14	1	3	4
6/60	6/120																			
6/60	—									1		1	.08	1		1	.03			
Illiterate						11	7	18	1.34	2	1	3	.22	13	8	21	.73	2		2
Spectacles to be repaired...							1	1	.07					1		1	.03	3	2	5
Spectacles unsuitable ...										1	2	3	.22	1	2	3	.11	4	4	8
Spectacles lost																		1	2	3
High Myopia											1	1	08		1	1	.03			
Squint		5	6	11	1.75													3	3	6
Astigmatism																			1	1
Nystagmus						1		1	.07						1	1	.03			
Special cases in which vision could not be tested																		4	2	6
The following are included in the above return.																				
Nystagmus							1	1	.07						1	1	.03			
Squint						1	2	3	.23		2	2	.15	1	4	5	.16			
Spectacles to be repaired..										2	2	4	35	2	2	4	.14			
Spectacles unsuitable										4	3	7	.6	4	3	7	.23			

TABLE IIA.
RETURN SHOWING THE PHYSICAL CONDITION OF CHILDREN INSPECTED.

CONDITION.	Entrants.				Intermediate.				Leavers.				Total.				Special Cases.		
	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total	Per cent.	Boys	Girls	Total
Number notified	335	421	756		772	789	1561		750	731	1481		1857	1941	3798				
Total inspected	278	349	627		672	668	1340		685	615	1300		1635	1632	3267		175	199	374
No. of cases in which Parents were present	85	126	211	33.65	105	149	254	18.96	36	66	102	7.8	226	341	567	17.35			
No. of cases in which Parents were notified by letter ...	34	39	73	11.64	158	185	343	25.6	135	147	282	21.7	327	371	698	21.36			
Clothing—																			
Satisfactory	274	346	620	98.88	653	663	1316	98.21	677	608	1285	98.9	1601	1617	3221	98.6	1		1
Unsatisfactory	4	3	7	1.12	19	5	24	1.79	8	7	15	1.1	31	15	46	1.4			
Footgear—																			
Satisfactory	273	346	619	98.72	666	665	1331	99.33	679	615	1294	99.6	1618	1626	3244	99.3			
Unsatisfactory	5	3	8	1.28	6	3	9	.67	6		6	.4	17	6	23	.7		1	1
Nutrition—																			
Excellent	19	27	46	7.33	37	44	81	6.04	47	93	140	10.8	103	164	267	8.17			
Normal	250	315	565	90.11	609	606	1215	90.67	585	473	1058	80.14	1444	1394	2838	86.87			
Below Normal	9	7	16	2.56	25	13	38	2.84	23	36	59	4.5	57	56	113	3.46			
Bad					1	5	6	.45	30	13	43	3.3	31	18	49	1.5		2	2
Cleanliness of Head—																			
Clean	270	290	560	89.31	652	463	1115	83.21	684	402	1086	83.6	1606	1155	2761	84.57	1		1
Dirty	2	11	13	2.07	14	86	100	7.46		121	121	9.3	16	218	234	7.1			
Pediculi present	6	48	54	8.62	6	119	125	9.33	1	92	93	7.1	13	259	272	8.33		15	15
Cleanliness of Body—																			
Clean	272	340	612	97.61	657	656	1313	97.98	684	614	1298	99.84	1613	1610	3223	98.67			
Dirty	6	9	15	2.39	15	12	27	2.02	1		1	.08	22	21	43	1.3		3	3
Pediculi present ...										1	1	.08		1	1	.03			
Skin—																			
No Disease	261	331	592	94.42	643	652	1295	96.65	671	611	1282	98.6	1575	1594	3169	96.91			
Ringworm: Body ...	6	3	9	1.43	6	2	8	.6	1	1	2	.2	13	6	19	.58	1	1	2
Ringworm: Head ...	5	3	8	1.28	3		3	.22					8	3	11	.36			
Impetigo	6	11	17	2.71	17	7	24	1.79	7	1	8	.6	30	19	49	1.5	10	8	18
Scabies	1	1	2	.32	2	7	9	.67	5	1	6	.4	8	9	17	.52			
Other Diseases	1		1	.16	1		1	.07	1	1	2	.2	3	1	4	.13	10	5	15
Teeth—																			
Sound	161	214	375	59.81	346	323	669	49.93	354	322	676	52.	861	859	1720	53.24			
Less than four decayed...	93	112	205	32.7	283	309	592	44.18	292	265	557	42.8	668	686	1354	41.44			
Four or more decayed ...	24	23	47	7.49	43	36	79	5.89	39	28	67	5.2	106	87	193	5.32			
Nose and Throat—																			
No Defect	164	190	354	56.46	421	429	850	63.43	579	503	1082	83.2	1164	1122	2286	63.03			
Mouth Breathers ...					2	3	5	.37	5	8	13	1.	7	11	18	.55			
Tonsils slightly enlarged	32	38	70	11.16	40	65	105	7.84	66	75	141	10.8	138	178	316	8.71		1	1
Tonsils much enlarged	14	27	41	6.54	30	38	68	5.08	22	22	44	3.4	66	87	153	4.21		5	5
Adenoids: Slight ...	37	48	85	13.55	88	77	165	12.31	14	10	24	1.9	139	135	274	7.55	1	16	17
Adenoids: Marked ...	44	60	104	16.59	108	77	185	13.81	4	5	9	.7	156	142	298	8.21	20	15	35
Diseases of the Eye—																			
No Disease	269	341	610	97.28	639	632	1271	94.85	678	613	1291	99.3	1586	1586	3172	97.28			
Conjunctivitis	4	2	6	.96	6	4	10	.75	1		1	.08	11	6	17	.52	10	5	15
Blepharitis	5	6	11	1.76	25	29	54	4.03	4	1	5	.4	34	36	70	1.94	2	9	11
Opacities of Cornea ...					2	1	3	.22		1	1	.08	2	2	4	.13		3	3
Other Diseases						2	2	.15	2		2	.14	2	2	4	.13	1		1
Diseases of Ear—																			
No Disease	247	326	573	91.36	616	632	1248	93.13	682	611	1293	99.5	1545	1569	3114	95.31			
Obstruction R.	7	5	12	1.92	20	13	33	2.46		2	2	.1	27	20	47	1.43	1	3	4
Obstruction L.	16	18	34	5.44	22	11	33	2.46					38	29	67	2.05			
Otorrhœa R.	4		4	.64	8	8	16	1.2	3	2	5	.4	15	10	25	.76	14	9	23
Otorrhœa L.	4		4	.64	6	4	10	.75					10	4	14	.45		2	2
Speech—																			
Not Defective	278	348	626	99.84	672	668	1340	100	685	615	1300	100	1635	1631	3266	99.97			
Defective Articulation		1	1	.16										1	1	.03			
Heart and Circulation—																			
No Disease	269	346	615	98.08	661	652	1313	97.98	678	611	1289	99.2	1608	1609	3217	98.46			
Organic Disease		1	1	.16	1	2	3	.22	1	2	3	.2	2	5	7	.23			
Functional Disease ...	3	1	4	.64	3	3	6	.45	5	1	6	.5	11	5	16	.49	1		1
Anæmia	6	1	7	1.12	7	11	18	1.35	1	1	2	.1	14	13	27	.82			
Lungs—																			
No Disease	260	326	586	93.44	655	651	1306	97.46	683	614	1297	99.8	1598	1591	3189	97.8			
Chronic Bronchitis and Bronchial Catarrh ...	16	22	38	6.08	16	16	32	2.39	1	1	2	.14	33	39	72	2.		1	1
Tuberculosis suspected...	2	1	3	.48	1	1	2	.15	1		1	.06	4	2	6	.2	1	2	3
Tuberculosis, Non-Pulmonary—																			
No Disease	277	349	626	99.84	670	667	1337	99.78	684	615	1299	99.94	1631	1631	3262	99.84			
Glands	1		1	.16		1	1	.07					1	1	2	.06			
Other Forms					2		2	.15	1		1	.06	3		3	.1	1		1
Diseases of Nervous System—																			
No Disease	277	345	622	99.2	672	666	1338	99.85	684	615	1299	99.94	1633	1626	3259	99.74			
Chorea		4	4	.64		2	2	.15	1		1	.06	1	6	7	.23			
Other Diseases	1		1	.16									1		1	.03			
Rickets—																			
No Disease	278	348	626	99.84	672	668	1340	100.	683	614	1297	99.8	1633	1630	3263	99.87			
Slight									2	1	3	.2	2	1	3	.1	1		1
Marked		1	1	.16										1	1	.03			
Deformities—																			
No Deformity	277	349	626	99.84	666	665	1331	99.33	684	615	1299	99.94	1627	1629	3256	97.87			
Deformity Present ...	1		1	.16	6	3	9	.67	1		1	.06	8	3	11	.36	1		1
Other Diseases or Defects	6	2	8	1.28	14	11	25	1.87	8	17	25	19.2	28	30	58	1.77	6	7	13
Mental Condition—																			
Bright	132	185	317	50.55	321	351	672	50.15	277	267	544	41.85	730	803	1533	46.89			
Fair	126	138	264	42.12	254	257	511	38.14	314	264	578	44.15	694	659	1353	41.44			
Dull	20	26	46	7.33	94	59	153	11.42	92	82	174	13.4	206	167	373	11.41			
Backward					2	1	3	.22	2		2	.15	4	1	5	.16			
Mentally Deficient ...					1		1	.07		2	2	.15	1	2	3	.10	1		1

AVERAGE HEIGHT AND WEIGHT OF CHILDREN EXAMINED DURING PAST TEN YEARS.

	BOYS.						GIRLS.					
	1st Age Period.		2nd Age Period.		4th Age Period (Leavers).		1st Age Period.		2nd Age Period.		4th Age Period (Leavers).	
Year.	Av. Ht.	Av. Wt.	Av. Ht.	Av. Wt.	Av. Ht.	Av. Wt.	Av. Ht.	Av. Wt	Av. Ht.	Av. Wt.	Av. Ht.	Av. Wt.
	Ft. Ins.	St. Lb. Oz.	Ft. Ins.	St. Lb. Oz.	Ft. Ins.	St. Lb. Oz.	Ft. Ins.	St. Lb. Oz.	Ft. Ins.	St. Lb. Oz.	Ft. Ins.	St. Lb. Oz.
1909	3 3	2 8 7.1	3 7.6	3 1 12.9	4 6.3	5 0 7.4	3 2	2 7 10.4	3 7.3	3 0 9.7	4 6.6	4 13 6.4
1910	3 3.4	2 9 5.4	3 6.8	3 0 7.4	4 5.6	4 11 3.2	3 2.5	2 7 11.4	3 6.5	2 13 6.3	4 6.5	4 12 11.3
1911	3 4	2 7 6.6			4 5.2	4 12 1.1					4 5.9	4 13 6.6
1912	3 4.1	2 9 4.7	3 9.1	3 4 1	4 5.8	4 12 5	3 3.5	2 8 4.5	3 8.7	3 3 3.5	4 8.8	5 3 4
1913	3 4.3	2 9 6	3 9.5	3 5 12	4 5.7	4 12 5	3 3.9	2 7 8.5	3 9.2	2 13 15	4 6.8	5 0 4.5
1914	3 4.1	2 9 2	3 9.4	3 4 8	4 6	4 13 8	3 3.8	2 8 3	3 9.1	3 2 9	4 7.8	4 13 13
1915	3 4.3	2 9 5	3 9	3 5 0	4 5.9	4 12 15.8	3 4	2 8 9.6	3 9.3	3 2 11.7	4 5.9	4 12 11.6
1916	3 4.2	2 10 4	3 9.7	3 5 6.5	4 5.4	4 12 0	3 4.1	2 9 12	3 9.1	3 2 1.9	4 6	4 12 12
1917	3 3.9	2 8 4	3 9.2	3 4 14	4 5.8	4 12 10.6	3 3.7	2 8 2	3 8.7	3 2 3	4 6.9	4 13 1
1918	3 3.9	2 9 7	3 9.8	3 5 3	4 5.9	4 12 14	3 4.2	2 8 9	3 9.3	3 3 3	4 6.2	4 13 7
Av'ge	3 3.9	2 9 0.3	3 9.3	3 4 1.8	4 5.7	4 12 10.2	3 3.5	2 8 4.2	3 8.5	3 1 12.3	4 6.7	4 13 10.9

RINGWORM, IMPETIGO, SCABIES AND VARIOUS SKIN DISEASES.—These figures do not represent the number of children affected with these diseases, inasmuch as those known to be affected in this way are excluded from school, and would not, therefore, be present at the inspection. A number of these cases are detected by the teachers and sent up to the Inspection Clinic. (See page 24 *et seq.*) In every instance, however, there was an increase in the number of these cases detected at the Medical Inspections. This increase was common to all ages and both sexes.

ENLARGED TONSILS AND ADENOIDS.—An increased number of children were found suffering from these conditions, and an increased number were referred for treatment. This does not necessarily mean for operative treatment, but where the child is showing signs of deafness, of marked nasal obstruction, or other serious defect, an operation is advised.

TUBERCULOSIS.—.2% of the children examined were suspected to be suffering from early tuberculosis of the lungs and from other forms of this disease.

This figure, of course, does not represent the percentage of tuberculous children in the Borough.

A better idea of the real amount of tuberculosis in Warrington among school children is to be gathered from the notifications received under the Public Health Tuberculosis Regulations, 1912.

The following table shows the number of school children suffering from different forms of the disease who were living in the Borough on the 31st December, 1918:—

	Attending School.	Not Attending School.	Total.
Tuberculosis of Lungs	35	15	50
,, ,, Glands	36	12	48
,, ,, Abdomen	7	—	7
,, ,, Peritoneum	9	9	18
,, ,, Skin	3	3	6
,, ,, Spine	2	5	7
,, ,, Hip	3	2	5
,, ,, Ankle	1	2	3
,, ,, Knee	1	1	2
,, ,, Chest Wall	1	—	1
,, ,, Clavicle	1	—	1
,, ,, Ribs	4	—	4
,, ,, Elbow	1	—	1
,, ,, Foot	2	—	2
,, ,, Brain	1	—	1
,, ,, Finger	1	—	1
,, ,, Mesenteric Glands	—	1	1
	108	50	158

(Total for 1917 was 151 cases.)

A number of school children are at present living in contact with, or have been in contact with, cases of tuberculosis, as seen from the following list:—

Number of school children at present in contact with living cases of:—	
Pulmonary Tuberculosis	440
Other forms of Tuberculosis ...	292
Number of school children who have been in contact with:—	
Cases of Pulmonary Tuberculosis that have died during the year 1918	107
Cases of other forms of Tuberculosis that have died during the year 1918	48
Total ...	887

Any doubtful case is referred to the Medical Officer of Health.

During 1918 the following cases were examined at the Health Office, where a record was kept of their weight and the physical signs entered on a special chart:—

	No. of Cases.	No. of Examinations.
Tuberculosis of Lungs	50	140
Suspected Tuberculosis of Lungs...	16	38
Tuberculosis of Glands	13	15
,, ,, Ankle	1	1
,, ,, Spine	3	4
,, ,, Ribs	2	2
,, ,, Skin	3	3
,, ,, Peritoneum ...	9	18
,, ,, Hip	2	6
,, ,, Knee	1	1
,, ,, Brain	1	2
	101	230

The need for a special institution for treating and educating many of these cases is fully recognised and will have to be faced in the near future.

Five cases (children of school age) were treated in Sankey Sanatorium, with results as stated below:—

Re-attending School	2
Not yet re-attending School...	3
	5

Nine deaths have occurred during the year of children of school age from the undermentioned forms:—

Tuberculosis of Lungs ...	4
,, ,, Foot ...	1
,, ,, Peritoneum	1
,, ,, Brain ...	2
,, ,, Hip ...	1
Total ...	9

Mental Condition.—As to whether the child is bright, fair or dull, the opinion of the teacher is chiefly taken, but the Medical Officer judges as to the mental condition of those who are classed as "backward" or "mentally deficient." A certain number of these children were specially examined or kept under observation during the year in order to determine their fitness, or otherwise, to benefit by instruction in an ordinary elementary school.

There are some children attending our schools who are obviously mentally defective and will make no progress at all with the ordinary curriculum, but as yet there are no special institutions open to them. (See also page 18.)

Defective Vision.—The eyesight of boys and girls in the first age group is not tested unless in exceptional cases.

The following figures show the result of the Routine Inspection for the year (see Special Table):—

Total number of children whose vision was examined ...	2611	
Number of children with normal vision in both eyes ...	719	= 27.6%
Number of children with good vision (not less than 6/9 both eyes)	1275	= 48.8%
Number of children with fair vision (not less than 6/12 and without eye-strain) ...	236	= 9.03%
Number of children requiring treatment	381	= 14.5%

(For further particulars re treatment of these cases, see p. 22.)

Examination of Special Cases Submitted by Head Teachers.—At the time of the Routine Inspection of the various age groups the teachers bring out special cases to the doctor.

The table shows the suspected defect for which the child was submitted, together with the result of the Medical Officer's examination:—

	Defect Present.	Defect Absent.	Doubtful.	Total.
Defective Vision	73	43	11	127
Squint	5	—	2	7
Spectacles Unsuitable	7	1	1	9
Spectacles Broken	8	—	1	9
Cataract	1	—	—	1
Conjunctivitis & Blepharitis	27	—	—	27
Corneal Opacity	3	—	—	3
Adenoids	35	6	18	59
Enlarged Tonsils	6	—	—	6
Enlarged Glands	4	—	—	4
Deafness	10	1	—	11
Pediculosis (head)	20	—	—	20
Pediculosis (body)	—	—	—	—
Dirty Clothing	4	—	—	4
Ringworm (Scalp)	2	—	—	2
Impetigo	19	—	—	19
Scabies	1	—	—	1
Other Skin Diseases	3	2	—	5
Abscesses Septic Sores, &c.	9	—	—	9
Aural Discharge	23	2	—	25
Tuberculosis	2	—	1	3
T.B. Bones and Joints	1	—	—	1
Lupus	1	—	—	1
Debility	1	1	—	2
Anæmia	2	—	—	2
Defective Speech	2	2	—	4
Incontinence of Urine	4	1	—	5
Epilepsy	1	—	—	1
Chorea	1	—	—	1
Sore Throat	4	—	2	6
Pharyngitis	2	—	—	2
Rickets	1	—	—	1
Malnutrition	2	—	—	2
Other Diseases	4	1	—	5
	288	60	36	384

(In 1917 there were 487 cases submitted by the Head Teachers to the A.S.M.O.)

Exclusions.—384 children were excluded by the A.S.M.O. as a result of the Routine Medical Inspection:—

Impetigo	31
Ringworm: Skin	15
Ringworm: Scalp	10
Blepharitis	37
Conjunctivitis	12
Stye	2
Boils	1
Abscess	2
Eczema	1
Scabies	17
Wax in Ears	1
Enlarged Glands	1
Aural Discharge	15
Pediculosis (head)	266
Pediculosis (body)	1
Defective Footgear	1
Dirty Clothing	2
Chorea	1
No. of Defects	416

Further Examination of Cases Selected at the Inspections in the Schools.—The further examination of certain cases takes place at the Inspection Clinic on Friday afternoons and Saturday mornings. These cases consist of those children whom it is impossible to examine thoroughly during the Routine Examination.

The following table shows the result of the examination of 301 such children, compared with 230 similar cases last year:—

	Defect Present.	Defect Absent.	Doubtful.	Total.
Enlarged Tonsils	15	—	1	16
Adenoids	77	52	2	131
Defective Vision	13	4	—	17
Squint	2	2	—	4
Corneal Opacities	2	—	—	2
Adenitis	—	1	—	1
Spectacles Unsuitable	5	2	—	7
Spectacles Broken	3	—	—	3
Bronchitis	21	17	—	38
Asthma	1	—	—	1
Mouth Breather	1	—	—	1
Tuberculosis—				
Lungs	3	—	7	10
Glands	1	—	1	2
Inguinal Hernia	1	—	—	1
Chorea	2	2	1	5
Epilepsy	1	—	—	1
Deafness	1	—	—	1
Heart Disease	14	3	—	17
Anæmia	4	1	—	5
Blepharitis	1	—	—	1
Debility	2	—	—	2
Infantile Paralysis	1	1	—	2
Rickets	8	—	—	8
Aural Discharge	2	—	—	2
Incontinence	1	—	—	1
Mentally Defective	4	—	—	4
Hyperphoria	3	—	—	3
Other Diseases or Defects	15	—	—	15
	204	85	12	301

MEDICAL INSPECTION—SECONDARY SCHOOL.

Examination of the children in the Entrant Group was instituted for the first time at the Secondary School during 1918.

Altogether 58 children (29 boys and 29 girls) were inspected. The conditions found were very satisfactory.

General nutrition was normal or above normal in all cases except in that of one girl, who was somewhat below normal.

In two cases (boys) were four or more teeth found decayed, whilst 10 boys and 13 girls had sound dentitions.

There was one case (boy) of congenital disease of the heart.

Vision was normal in 22 boys and 27 girls.

The cases referred for treatment were:—

Enlarged Tonsils	1
Adenoids	8
Enlarged Tonsils and Adenoids	1
Defective Vision	3
Defective Teeth	2
Congenital Heart Disease	1
Total	16

Satisfactory treatment was obtained in all cases and two remain under observation.

DEFECTIVE CHILDREN IN THE AREA.

I.—PHYSICALLY DEFECTIVE CHILDREN.

The work of medically supervising this class of child has been carried out on lines detailed in previous Reports.

The cases kept under observation were as follows:—

A.—NOT ATTENDING SCHOOL.

Tuberculosis of—		
Lungs	15	
Other organs	35	50
Cardiac Disease		3
Epilepsy		3
Rickets		11
Debility (? Tuberculous)		4
Cystitis		1
Old Infantile Paralysis		6
Chronic Otitis Media		1
		79

(In 1917 the number was 43.)

B.—ATTENDING SCHOOL.

Anæmia and Debility		7
Old Infantile Paralysis		26
Tuberculosis of—		
Lung	35	
Other organs	73	108
Heart Disease		8
Defective Speech		19
Partially Blind (Corneal Ulcers, &c.)		5
Rickets		18
Epilepsy		8
Congenital Deformity (Elbow Joints)		1
Partially Deaf		1
Inguinal Hernia		1
Incontinence of Urine		2
Cleft Palate		1
		205

(In 1917 the number was 137.)

II.—MENTALLY DEFECTIVE CHILDREN.

In the following cases the special schedule drawn up by the Board of Education has been completed, recording the mental capacity of certain of the children of school age resident in this Borough.

In every instance the intelligence of the child was assessed by the mental tests designed by Binet and Simon.

The records show:—

	Boys.	Girls.	Total.
Dull	4	3	7
Very Backward	10	7	17
Mentally Deficient	11	14	25
Imbeciles	5	5	10
Idiots	4	3	7
			66

The number of these at present attending school is shown in Table III.

The form of treatment necessary for these children is as follows:—

Ordinary Elementary School	9
Special Class, with extra supervision	19
Special School	21
No School (non-educable)	17
	66

These cases are kept under observation and from time to time new cases are added to them as attention is drawn to them by parents, school teachers, or school attendance officers. This cannot be considered a complete list by any means, but it has been found quite impossible, owing to pressure of work, to carry out a systematic examination of all the dull and backward children in our schools.

Under the Mental Deficiency Act (1913) and Elementary Education (Defective and Epileptic Children) Act, 1914, special arrangements will have to be made for dealing with a certain number of these children.

A summary of the cases of exceptional children is given in the next Table.

TABLE III.—NUMERICAL RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA IN 1918.

			Boys.	Girls.	Total.
Blind (including partially blind).		Attending Public Elementary Schools	3	3	6
		Attending Certified Schools for the Blind	2	5	7
		Not at School	2	2	4
Deaf and Dumb (including partially deaf).		Attending Public Elementary Schools	—	1	1
		Attending Certified Schools for the Deaf	5	5	10
		Not at School	—	—	—
Mentally Deficient.	Feeble-minded.	Attending Public Elementary Schools	7	12	19
		Attending Certified Schools for Mentally Defective Children	—	—	—
		Notified to the Local (Control) Authority during the year	—	—	—
		Not at School	13	17	30
	Imbeciles.	At School	—	—	—
		Not at School	5	5	10
	Idiots.	——————	4	3	7
Epileptics.		Attending Public Elementary Schools	6	4	10
		Attending Certified Schools for Epileptics	—	—	—
		Not at School	4	5	9
Physically Defective.	Pulmonary Tuberculosis.	Attending Public Elementary Schools	16	19	35
		Attending Certified Schools for Physically Defective Children	—	—	—
		Not at School	8	7	15
	Other forms of Tuberculosis.	Attending Public Elementary Schools	34	39	73
		Attending Certified Schools for Physically Defective Children	—	—	—
		Not at School	11	24	35
	Cripples other than Tubercular.	Attending Public Elementary Schools	30	14	44
		Attending Certified Schools for Physically Defective Children	—	—	—
		Not at School	10	7	17
		Total	160	172	332

B.—THE "FOLLOWING UP" OF CHILDREN FOUND TO BE DEFECTIVE.

As the procedure adopted for following up was exactly the same as detailed in previous Reports it will not be necessary to mention it this year.

SUMMARY OF THE RESULTS OF THE VISITS PAID BY THE SCHOOL ATTENDANCE OFFICERS IN "FOLLOWING UP" DURING THE PAST TWELVE MONTHS :—

Defects.	Number of Children.	Received Attention.		Not received Attention.
		1st Visit.	2nd Visit	
Vision	387	92	18	277
Squint	16	2	1	13
Adenoids	176	32	10	134
Tonsils	122	34	11	77
Tonsils & Adenoids ...	11	2	1	8
Glasses unsuitable ...	7	2	2	3
Adenoids & Vision ...	24	11	1	12
Tonsils & Vision	14	3	—	11
Adenoids, Tonsils and Vision	1	1	—	—
	758	179	44	535

The next Table shows the result of the re-examinations by the School Medical Officer of all the defective children found during the year. It does not, however, represent the total work done, as it only shows the number of children re-examined and not the total number of re-examinations:—

Defects.	Examination at which found.	No. of children.	Letters sent.	Visits paid.	Treatment satisfactory.	Left school.	Out of borough.	Before committee.	Under observation.
Vision	R.	444	437	526	330	7	4	3	103
,, ...	Sp. S.	133	77	83	92	1	1	—	39
,, ...	F. E.	7	1	5	3	—	—	—	4
,, ...	Sp.(C.)	16	7	9	14	—	—	—	2
Squint	R.	23	22	24	16	—	—	—	7
,, ...	Sp. S.	27	14	14	17	—	—	—	10
,, ...	F. E.	3	1	—	1	—	—	—	2
,, ...	Sp.(C.)	6	1	2	5	—	—	—	1
Adenoids	R.	230	227	317	158	—	2	—	70
,, ...	Sp. S.	38	29	33	32	—	—	—	6
,, ...	F. E.	48	4	11	17	—	—	—	31
,, ...	Sp.(C.)	17	10	10	14	—	1	—	2
Enlarged Tonsils	R.	147	139	200	101	2	1	—	43
,, ,, ...	Sp. S.	12	4	6	5	—	—	—	7
,, ,, ...	F. E.	8	—	2	3	—	—	—	5
,, ,, ...	Sp.(C.)	7	3	4	7	—	—	—	—
Tonsils and Adenoids ...	R.	24	23	36	17	—	1	1	6
,, ,, ...	Sp. S.	6	3	3	5	—	—	—	1
,, ,, ...	F. E.	5	1	2	2	—	—	—	3
,, ,, ...	Sp.(C.)	4	1	1	4	—	—	—	—
Vision and Adenoids ...	R.	22	22	30	12	—	—	—	10
,, ,, ...	Sp. S.	1	1	1	1	—	—	—	—
,, ,, ...	F. E.	—	—	—	—	—	—	—	—
,, ,, ...	Sp.(C.)	—	—	—	—	—	—	—	—
Vision and Tonsils ...	R.	10	10	15	7	—	—	—	3
,, ,, ...	Sp. S.	1	2	2	1	—	—	—	—
,, ,, ...	F. E.	1	—	—	—	—	—	—	1
,, ,,	Sp.(C.)	—	—	—	—	—	—	—	—
Tonsils, Adenoids and Vision	R.	3	3	5	3	—	—	—	—
,, ,,	Sp. S.	—	—	—	—	—	—	—	—
,, ,,	F. E.	—	—	—	—	—	—	—	—
,, ,,	Sp.(C.)	—	—	—	—	—	—	—	—
Spectacles broken ...	R.	10	10	14	9	—	—	—	1
,, ,,	Sp. S.	12	8	10	10	—	—	—	2
,, ,,	F. E.	—	—	—	—	—	—	—	—
,, ,,	Sp.(C.)	3	1	2	3	—	—	—	—
Spectacles unsuitable	R.	9	8	9	9	—	—	—	—
,, ,,	Sp. S.	10	5	5	3	—	—	—	7
,, ,,	F. E.	2	1	1	1	—	—	—	1
,, ,,	Sp.(C.)	2	2	2	2	—	—	—	—
Totals		1288	1074	1379	901	10	10	4	367

R. Routine. F. E. Further examination.
Sp.S. Special cases at school. Sp.(C.) Special examinations at Clinic.

In Table II. on page 9 is shown the number of defects found at Medical Inspections (Routine and Special) [but excluding Inspection Clinic cases of minor ailments (page 24)] and in the following table (Table IV.) will be seen how many of the cases received treatment.

TABLE IV.—TREATMENT OF DEFECTS OF CHILDREN DURING 1918.

Condition.	No. of defects found, for which treatment was considered necessary.			No. of defects for which no report is available.	No. of defects treated.	Results of treatment.			No. of defects not treated.	Percentages of defects treated.
	From previous year.	New*	Total.			Remedied.	Improved.	Unchanged.		
Clothing		46	46	—	46	46	—	—	—	100%
Footgear		23	23	—	23	23	—	—	—	100%
Cleanliness of head		606	606	—	606	606	—	—	—	100%
Cleanliness of body		44	44	—	44	44	—	—	—	100%
Nutrition	10	52	62	7	55	—	16	39	—	88.7%
Nose and throat	130	423	553	—	490	413	4	73	63	88.6%
External eye disease		113	113	—	113	113	—	—	—	100%
Ear disease		64	64	—	64	64	—	—	—	100%
Teeth		193	193	—	193	193	—	—	—	100%
Heart and circulation	5	18	23	—	23	13	7	3	—	100%
Lungs		78	78	—	78	70	6	2	—	100%
Nervous system		8	8	—	8	—	5	3	—	100%
Skin		135	135	—	135	135	—	—	—	100%
Rickets		4	4	—	4	—	4	—	—	100%
Deformities	4	7	11	3	8	—	2	6	—	100%
Tuberculosis:										
(non-pulmonary)		5	5	—	5	—	4	1	—	100%
Speech		1	1	—	1	—	1	—	—	100%
Mental Condition	1	3	4	1	3	—	2	1	—	75%
Vision and Squint	92	643	735	—	694	451	176	67	41	94.4%
Hearing		10	10	—	10	10	—	—	—	100%
Miscellaneous	13	45	58	—	52	16	15	21	6	89.6%
Total	255	2521	2776	11	2655	2197	242	216	110	95.6%

* The return shows comprehensively all defects found during the year, from whatever source derived, which required treatment, except children found at the Inspection Clinic (page 24) to be suffering from minor ailments.

Special attention is drawn to the more satisfactory percentages of cases receiving treatment for defects of the nose and throat and for defective vision.

Contrasted with previous years the figures are:—

	1918.	1917.	1916.	1915.
Defects of Nose and Throat	553	700	577	518
Number treated	490	486	172	105
	(88.5%)	(69.8%)	(29.8%)	(20.2%)
Defective Vision and Squint	735	1030	988	574
Number treated	694	796	534	245
	(94.4%)	(77.2%)	(54.0%)	(42.7%)

For further details with regard to the treatment of these special defects reference must be made to pages 30 and 31.

The next Table (V.) shows the number of children discovered during the year suffering from defects that required attention, and what proportion of these children received the necessary treatment. It refers only to children found at Routine Medical Inspection and certain Special Inspections, but not to all the children found suffering from minor ailments at the Inspection Clinic (*q.v.* page 24).

TABLE V.

(1) The total number of children medically inspected (whether code group, special or ailing child)	3641
(2) The number of children in (1) suffering from defects (other than uncleanliness or defective clothing or foot-gear) who require to be kept under observation (but not referred for treatment)	319
(3) The number of children in (1) who were referred for treatment (excluding uncleanliness, defective clothing, &c.)	2057
(4) The number of children in (3) who received treatment for one or more defects (excluding uncleanliness, defective clothing, &c.)	1705 (83%)

The percentage treated, 83% (compared with 75% in 1917), is the highest on record, and it must be borne in mind that the figures deal only with children found and dealt with in the year 1918.

It is obvious that the children referred for treatment at the latter end of the year often cannot receive treatment until the beginning of the next year and this tends to make the percentage appear somewhat lower.

COMMITTEE CASES AND PROSECUTIONS.

During the year it has been found necessary to notify parents of only four children to appear before the Medical Inspection Committee compared with notifications in respect of 18 children last year. This is a pleasing reduction, chiefly due to the fact that the parents have shown a greater readiness to accept the medical advice given. Of the four parents interviewed by the Committee, satisfactory action was afterwards taken by three of them. In the remaining case, as there was definite and expressed defiance on the parent's part, the particulars were reported to the Law Clerk and a summons eventually issued under Section 12 of the Children Act, 1908. At the hearing before the Magistrates a fine of 40s. was imposed.

C.—INSPECTION CLINIC.

The cases at the Inspection Clinic are examined by the Assistant School Medical Officer and sorted into those who should obtain treatment from the family doctor or special institution, those who should attend the Treatment Clinic, those who are fit for school but should attend the Treatment Clinic after school hours, and those who are fit for school without any treatment.

The cases submitted for examination comprise:—

(1) Children excluded from school at the Routine Medical Inspection suffering from contagious disease (see page 15).

(2) Children excluded by teachers on account of possible contagious disease (including White Card cases, page 25).

(3) Children referred by the School Attendance Officers for report as to their ability to attend school (Green Card cases, page 25).

(4) Children for further examination of suspected defects (see page 16).

(4) Children with defects to be re-examined as to the result of treatment or necessity for further treatment (see page 21).

An analysis of the cases of contagious disease dealt with in 1918 is as follows:—

Impetigo	1429
Ringworm	381
Eczema	62
Scabies	424
Conjunctivitis	1394
Blepharitis (and other eye diseases)	274
Aural Discharge	192
Pediculosis	448
Abscesses, Septic Sores, and Miscellaneous	1043
	5647

The following are comparative figures showing the numbers of this class of case that have attended during the past six years:—

1912	1741
1913	2430
1914	2891
1915	3274
1916	3824
1917	4298
1918	5647

Out of the cases referred by teachers the following (**White Card cases**) were found not to be suffering from contagious disease, and in the majority of cases these were referred to their own doctor:—

Abscesses, Boils, &c.	35
Adenoids and Enlarged Tonsils	4
Alimentary Ailments	10
Anæmia and Debility	16
Burns and Scalds	2
Bronchitis and Catarrh	14
Carious Teeth	2
Chorea	2
Cleft Palate	1
Ear Diseases (including Wax)	4
Enlarged Glands	27
Epilepsy	1
Eye Diseases	14
Headache	3
Incontinence of Urine	5
Infantile Paralysis	2
Nose and Throat Conditions	7
Rheumatism	4
Septic Sores, &c.	5
Skin Diseases (non-contagious)	18
Sprains and Bruises	5
Tuberculosis (Glands and Joints)	2
Wounds of Leg, &c.	5
	188

(In 1917, 255 such cases were submitted for examination.)

In addition, 184 children were certified fit for school on the occasion of their first attendance at the School Clinic.

The cases sent for examination by the School Attendance Officers were 82 in number (**Green Card cases**).

Abscesses, Boils, &c.	6
Alimentary Ailments	5
Anæmia and Debility	14
Bronchitis and Catarrh	13
Burns	1
Chorea	2
Contusions	4
Cystitis	1
Deafness	3
Epilepsy	1
Eye diseases	9
Incontinence	2
Nose and Throat Conditions	2
Rheumatism	6
Septic Sores, &c.	3
Skin Diseases	3
Tuberculosis (Glands, Joints, &c.)	7
	82

(In 1917, 110 such cases were submitted for examination.)

The further examinations (see page 16) and re-examinations (page 21) are also carried out at the Inspection Clinic.

EXAMINATION OF BURSARS, STUDENT AND PUPIL TEACHERS.

14 Candidates for Bursarships and Student Teacherships and 27 Candidates for Senior and Junior Scholarships were medically examined by the School Medical Officer.

EXAMINATION OF CHILDREN BEFORE ENTRY TO SPECIAL SCHOOLS.

2 Girls and 5 Boys before admission to Industrial Schools.

7 Boys and 2 Girls before re-admission to Deaf and Dumb Schools.

2 Boys before admission to Blind Schools.

6 Boys on behalf of the Police.

1 Boy on behalf of the N.S.P.C.C. Inspector.

D.—TREATMENT CLINIC.

I. MINOR AILMENTS.

(a) TREATMENT CLINIC.

The work has been carried on much as in previous years. The cases attending for treatment were as follows:—

	No. of Children.	No. of Attendances at the Treatment Clinic
Aural Discharge ...	114 ...	473
Ringworm: Skin ...	192 ...	2927
,, Scalp ...	142 ...	5614
Conjunctivitis ...	1315 ...	9243
Impetigo: Skin ...	898 ...	4773
,, Scalp ...	412 ...	3005
Blepharitis and other Eye Diseases ...	209 ...	1432
Miscellaneous ...	732 ...	7903
"After School" Cases	1110 ...	7715
	5124 ...	39991

The work done in recent years is shown by the following figures:—

	No. of Children treated.	No. of Attendances made by Children.
1913	268 ...	2036
1914	1973 ...	16391
1915	3721 ...	36531
1916	3631 ...	36919
1917	3802 ...	33378
1918	5124 ...	39991

These figures do not take into account the large number of attendances of children who were receiving home treatment (page 29) but had to report regularly at the Clinic.

A further large increase in the number of children dealt with is to be noted. A few points with regard to this annual increase were mentioned in the Report for 1917.

However efficient medical supervision may be in the schools there does not seem to be much likelihood of a marked diminution in cases of minor ailments until the parents themselves begin to realise the need for greater effort.

The next table gives further details and shows the average duration of absence from school of cases which completed treatment during the year:—

Disease.	No. of cases treated in School Clinic	Total No. of attendances.	Cases in which treatment completed.				
			No. of cases.	No. of attendances.	Average no. of attendances per case.	No. of days under treatment.	Average no. of days for treatment.
Aural Discharge—							
1918	114	473	111	451	4.09	883	7.9
1917	109	824	107	820	7.6	1317	12.3
1916	166	1752	161	1525	9.4	3268	20.3
1915	188	1542	186	1479	7.9	3003	16.1
1914	106	952	73	452	6.1	1262	17.2
1913	16	453	4	27	6.7	172	43.0
Scabies—							
1918	—	—	—	—	—	—	—
1917	—	—	—	—	—	—	—
1916	—	—	—	—	—	—	—
1915	33	397	33	397	17.03	797	24.1
1914	12	118	11	117	10.6	225	20.4
1913	6	41	3	21	7.0	93	31.0
Ringworm Skin—							
1918	192	2927	184	2993	16.2	6730	36.5
1917	158	2549	155	2511	15.5	4119	26.5
1916	175	2249	169	2199	13.01	3949	23.3
1915	144	1779	133	1685	12.6	3527	26 5
1914	79	693	74	668	9.0	2391	32.3
1913	14	116	13	107	8.2	587	45.1
Ringworm Scalp—							
1918	142	5614	119	5192	43.6	11171	93.8
1917	132	5134	110	4606	41.8	7806	70.9
1916	175	7582	146	6868	47.04	12469	85.4
1915	162	4481	134	3161	23.5	6549	48.8
1914	65	1607	37	808	21.8	4152	112.2
1913	19	441	6	146	24.3	920	153.3
Conjunctivitis—							
1918	1315	9243	1282	9088	7.08	17754	13.8
1917	372	3096	367	3050	8.3	4629	12.3
1916	418	4650	409	4548	11.1	8021	19.6
1915	732	10274	711	9973	11.2	17806	25.04
1914	598	7036	548	6407	11.6	17153	31.3
1913	88	437	70	352	5.0	1659	23.7
Impetigo Skin—							
1918	898	4773	874	4685	5.3	8481	9.7
1917	853	4076	849	4064	4.7	5811	6.8
1916	798	4155	793	4129	5.2	7145	9.01
1915	879	5738	866	5694	6.5	7591	8.7
1914	511	2527	507	2516	4.9	6019	11.8
1913	75	289	72	276	3.8	1038	14.4
Impetigo Scalp—							
1918	412	3005	399	3939	9.6	5351	13.4
1917	369	2074	365	2054	5.6	2907	7.9
1916	293	1925	287	1874	6.5	4147	14.4
1915	329	1883	321	1838	5.7	3199	9.9
1914	237	1481	227	1431	6 3	3432	15.1
1913	50	259	45	226	5.0	811	18.0
Blepharitis and other Eye Diseases—							
1918	209	1432	202	1389	6.8	2337	11.5
1917	216	1483	211	1421	6.7	2573	11.9
1916	347	2900	336	2785	8.2	5211	15.5
1915	294	2685	287	2616	9.1	5123	17.8
Miscellaneous—							
1918	732	4809	718	4727	6.5	7566	10.5
1917	827	5019	813	4922	6.05	7624	9.3
1916	493	3342	484	3240	6.7	5264	10.9
1915	376	2119	368	2065	5.6	4058	11.02
1914	305	1515	71	347	4.8	828	11.6

The figures for 1918 are not as satisfactory as they were in the previous year and show an increase in the average duration of treatment for all cases except aural discharge and blepharitis.

In the case of children suffering from aural discharge, however, this is not a real reduction, but due to the fact that only the number of days the child is away from school are taken into account. Many of these children after a few days' treatment are fit to resume attendance at school and to visit the Clinic as " after-school " cases for daily irrigations.

INDUSTRIAL EMPLOYMENT OF MOTHERS.

Now, although many factors are probably responsible for the increase in the number of minor ailments and for the increased length of time necessary to cure these cases, there is one cause which was specially prominent during the year—namely, lack of supervision of the child owing to the mother being employed away from her home.

In inquiring into the results of the employment of mothers the infantile mortality and sickness returns do not help much, because the infant is probably less effected than any other member of the family. In Warrington, at any rate, we find that as many as 84% of the women stay at home for a minimum of three months to breast feed the child from its birth. More than this, when the mother does leave home she arranges for some responsible person to look after her infant, and, if necessary, pays for this to be done.

It is the older child that suffers most from this lack of attention, and the older a child is the more it has to shift for itself. In rare cases only, when the mother goes out to work, are hot meals provided at mid-day, and the children generally have to forage for themselves and make a meal of such things as bread and butter or jam, meat pies, fruit tarts and cake. Adult members of the family, too, suffer in this respect. The effect on the nutrition of the child has been masked to a large extent by the increased family income enabling a higher standard of living to be reached, but this increased income was due more often to State allowances than to the earnings of the mother.

It is not surprising, seeing that the number of mothers employed in industry reached a maximum in 1918, that the number of children suffering from minor ailments should be larger than previously, and the time taken to cure the home treatment cases (*ped. cap.*, &c., see page 29) was nearly twice that of the previous year.

Something must be done to try and prevent the mother from engaging in work away from her own home if any real social progress is to be made. Definite prohibition of employment of women with children is not necessary, but our policy must be to make it easy for the mother to stay at home as opposed to the policy of making it easy for her to engage in industrial work.

Possibly legislation is needed to secure that a mother should be entitled to a proportion of the husband's earnings to enable her to look after the home and children when she is capable and willing to do so. Where the mother is a widow, deserted, or the wife of an invalid husband, the desirability of some form of mother's, or, rather, child's pension requires consideration.

The multiplication of institutions such as crêches or day-nurseries, however essential they were during the War, cannot be in the best interests of the nation.

The basis of all Public Health must be to give the people healthy homes, to teach them to lead healthy lives in those homes, and to arrange that there is a sufficient income for every family to enable the mother, or, where there is no mother, some other responsible person, to remain in each home to look after the little ones.

(*b*) HOME TREATMENT.

Some reasons for adopting this method of treating certain cases were given in my Report for 1916.

Home treatment, except in rare instances, was only permitted in cases where the mother was absent during the day if some other responsible relative would agree to look after the child. The duration of treatment, however, was considerably longer than in previous years, as is seen in the following table:—

HOME TREATMENT.

		Cases.	Atten.	Av.Atten.	Treatment. Days.	 Average.
Sev. Ped. Cap.	1918	424	2952	6.8	7484	17.6
	1917	317	1285	4.5	2905	9.1
Scabies	1918	387	2233	5.9	12907	33.3
	1917	373	2338	6.2	12398	33.2
Miscellaneous	1918	60	159	2.6	833	13.8
	1917	125	313	2.7	1027	8.2
Total	1918	871	5317	6.1	21224	24.3
	1917	815	3936	4.8	16330	20.03

WORK OF THE SCHOOL NURSES.

In addition to the enormous amount of work indefatigably carried out by the two School Nurses, in treating the cases in the Clinic under the supervision of the School Medical Officer, they have performed the following duties:—

Visits to homes of children	995
Present at Routine Medical Inspection in the schools with the A.S.M.O. ...	80
Notices sent to teachers with reference to excluded children	3164

But the mere formal representation by statistics of their routine work does not, by any means, do full justice to them.

Their activities are such that it is impossible to keep a record of the way in which their services are helping in the improvement of the home, as well as of the scholar.

I must say that they have performed their many and arduous duties in a most thorough manner, and I have nothing but praise for the way in which they have managed the children attending the Clinic.

II.—TONSILS AND ADENOIDS AND DEFECTIVE VISION.

Treatment at the Infirmary.

The work at the Infirmary was carried on under the same conditions as detailed in the Report for 1917.

The arrangement has enabled us to cope with a large number of the children who formerly were unable to obtain satisfactory treatment.

The Throat and Nose cases are dealt with by Dr. Binns, and the Eye cases by Dr. Fox. I am indebted to them for the following particulars of the 276 cases of tonsils and adenoids and the 221 cases of defective vision treated for us at the Infirmary during the year:—

(*a*) Tonsils and Adenoids.

Defect.	Satisfactory after Operation.		Unsatisfactory after Operation		Totals.		Grand Total.
	B.	G.	B.	G.	B.	G.	
Tonsils	35	39	6	1	41	40	81
Tonsils and Adenoids	59	54	1	1	60	55	115
Adenoids	47	33			47	33	80
	141	126	7	2	148	128	276

(*b*) DEFECTIVE VISION.

	Hypermetropia.	Hypermetropic Astigmatism.	Myopia.	Myopic Astigmatism.	Mixed Astigmatism.	Total
Vision improved ...	28	87	17	34	7	175
Vision not improved	30	7	—	—	—	37
*Defective Vision not due to errors of refraction	—	—	—	—	—	8
Normal Vision . .	—	—	—	—	—	1
					Total ...	221

* Defective Vision was due to corneal nebulæ in 6 cases and to cataract in 2.

Squint was found in 23 cases, spectacles were ordered in 20 of these; 4 were operated upon, and 10 will probably require operation.

III.—DENTAL.

The Clinic established in the Health Department in 1912 was carried on as usual during the year.

The policy adopted was explained in my last Report, and in this connection I give the following figures of the children dealt with:—

Age periods.	Dates.	No Inspected.		
		Boys.	Girls.	Total
9, 10 and 11 yrs.	29th January, 1918	19	32	51
8 and under	22nd Jan. to 15th May	1539	1522	3061
8, 9 and 10	1st July to 20th Dec.	1472	1291	2763
			Total	5875

For further particulars I refer you to Mr. Hutchison's Report, which is appended, and I must thank him for carrying on the work well and carefully.

CONCLUSION.

Dr. Lumb is still away on Military Service, and Dr. Paulusz has ably carried on the duties of Assistant School Medical Officer during the period May to December, 1918.

For the first few months of the year Dr. Gilder was Assistant School Medical Officer, but he left us in May to take up another appointment.

To Mr. Hutchison (School Dental Officer) and the two School Nurses (Nurse Teare and Nurse Brown) I have already referred.

Mr. Flood, Chief Sanitary Inspector, has given me much valuable assistance in investigating the sanitary condition of the schools.

I wish to convey my thanks to Mr. J. Moore Murray, the Director of Education, for assistance in collecting certain information.

I have much pleasure in recording that there has been that hearty co-operation of the officials of the Education Department with those of the Health Department during the past year which, I need scarcely add, is necessary for the due carrying out of the work detailed in this Report.

I am, Gentlemen,

Your obedient servant,

G. W. N. JOSEPH.

DENTAL OFFICER'S REPORT.

To the Education Authority of the
County Borough of Warrington.

Gentlemen,

I beg to submit my Report on Dental Inspection and Treatment for the year 1918. During the period 5,875 children were examined at the schools. The number is somewhat less than in the previous year, owing to the irregularity of attendance of the children on account of the influenza epidemic.

Of those children 1,194 (20.3%) were found to have sound teeth, and 4,681 (79.7%) were found to have defective dentition.

There are one or two points to which I would like to draw your attention. Parents are taking much greater interest in the condition of their children's teeth, and are also taking advantage of the facilities offered for the remedying of the defects at the Clinic. The very high percentage of defects in the temporary set of teeth will not show much improvement till the present and future mothers are instructed in the elements of dietetics for infants and children.

The increase in the number of special cases treated, which would have been more prominent if the year had been a normal one, is a point worth drawing attention to.

At one time, after they were referred to the Clinic by the A.S.M.O., the majority had to take their turn, along with those examined at the time of the School Dental Inspection; but now they receive early attention.

As a rule, those with very bad dentition are at once referred to the Clinic. In a big proportion of those special cases at least more than two attendances were found to be necessary.

There were 144 cases of Pyorrhœa Alveolaris successfully treated during the year, with very great benefit to the general health of these children.

Although the number of extractions in the temporary set of teeth is still large, wherever practicable the conservative plan is resorted to, in order to preserve these teeth.

There were a few cases of Necrosis of the jaw bones, due to accidental violence, and also to the negligence on the part of the child to seek timely treatment.

There were also a few cases of Hæmorrhage after operation successfully arrested by treatment with styptics and plugging the sockets.

Exostosis with severe toothache was cured by operation in two cases.

It has been my constant endeavour during the past year, when attending at the schools for inspection, and also at the Clinic, to emphasise the importance and the great necessity of a thorough use of tooth brush and powder night and morning, and I am particularly satisfied with the results, a large percentage of children obeying and carrying out my advice; it is also gratifying to observe the interest the parents are taking in this matter.

The following tables give in detail the work accomplished as a result of my inspections at the schools, and the treatment at the Clinic:—

SUMMARY OF WORK DONE

Year.	No. of children on the School Registers in the age periods examined.	No. of children inspected.	No. of parents present at examination.	No. of children referred for treatment.	No. for whom treatment was accepted.	No. actually presented for treatment.	No. of "specials" treated.	No. re-treated as result of periodical re-examination	Total no. of attendances made at the Clinic.	No. of half-days devoted to treatment.	No. of half-days devoted to inspection.
1918	6962	5875	322	4681 79.7%	3648	2319	1055	293	3667	343	141
1917	9065	7658	364	6246 81.5%	5038	3836	755	261	4989	353	138

As regards the actual form of treatment, conservation rather than extraction has been the motto as far as practicable.

at our Dental Clinic, and I am glad to be able to record an increase in the proportion of fillings compared with the previous year.

DETAILS OF TREATMENT GIVEN

Year.	Extractions.		Fillings.		No. of cases where local anæsthesia was used.	No. of cases Where nitrous oxide was used.	No. of cases involving consultation.	No. of other operations.
	Temp Teeth	Perm. Teeth	Temp. Teeth.	Perm. Teeth.				
1918	5538	168	208	400	2182	2	485	345
1917	7963	187	135	783	2918	nil.	128	111

In conclusion, I trust that with the return of normal conditions I shall receive more assistance from the School Nurses.

I am, Gentlemen,

Your obedient servant,

W. HUTCHISON.